

Abstract

The invention concerns a device for generating, by interaction(s) with three or four waves from one or several incident optical radiation(s), one or several emergent radiation(s) tuneable at least in frequency. The invention is characterised in that it consists essentially of a crystal with non-linear optical property whereof the surface defines a cylindrical volume with complete revolution, or truncated on at least two opposite faces symmetrical relative to its axis of revolution, or partial on one of two said faces. Said device is particularly designed for applications in spectroscopy, remote sensing, long-distance transmission, remote guiding. The invention also concerns a method using said device.